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(54) Title: TRANSMITTER APPARATUS AND METHOD FOR USE WITH ADVERTISING DISPLAY

(57) Abrégé/Abstract:

A method and apparatus for transmitting from a base unit to a plurality of portably infrared devices using established communication protocols for the purpose of disseminating advertising and other sorts of information, through audio, visual, textual or other means. A signal (infrared, radio frequency or other wireless signal) is generated and transmitted from a base unit. Any portable device(s) with the ability to receive and process these signals in sufficient proximity to a transmitter apparatus will receive the transmission (appropriately encoded audio, visual, textual, or other information) from that transmitter apparatus. The transmitter apparatus will also be capable of receiving a signal from the portable device that will correspond to a specific registered account that may be credited with reward points awarded by the advertiser.



TITLE:

TRANSMITTER APPARATUS AND METHOD FOR USE WITH ADVERTISING DISPLAY

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ABSTRACT:

A method and apparatus for transmitting from a base unit to a plurality of portable infrared devices using established communication protocols for the purpose of disseminating advertising and other sorts of information, through audio, visual, textual or other means. A signal (infrared, radio frequency or other wireless signal) is generated and transmitted from a base unit. Any portable device(s) with the ability to receive and process these signals in sufficient proximity to a transmitter apparatus will receive the transmission (appropriately encoded audio, visual, textual, or other information) from that transmitter apparatus. The transmitter apparatus will also be capable of receiving a signal from the portable device that will correspond to a specific registered account that may be credited with reward points awarded by the advertiser.

SUMMARY OF THE INVENTION:

The present invention relates to the enhancement of billboards and other advertising in public places. The advertising display will be accompanied by a small transmitter apparatus that sends out information stored in memory via a signal capable of being received by portable devices such as mobile phones and other hand held electronic devices. The user of the portable device would have the option of storing the information sent by the transmitter or using the information to make direct contact with the advertiser, depending upon the capabilities of the individual device.

It is a further aspect of the invention that the transmitter apparatus would also be equipped with a receiver and a means of accessing and updating a remote database. Users of the system will be able to set up a unique identification code and a related account that will be credited with reward points upon interacting with a transmitter apparatus which has been designated by the advertiser to reward a certain number of points for certain interactions. The user will send the unique identification code to the transmitter apparatus, which will in turn receive the identification code and access the remote database, crediting the account related to that code with the amount of points determined by the advertiser.

DESCRIPTION OF THE INVENTION:

In the preferred embodiment of the present invention, the transmitting apparatus consists of a transmitter, receiver, power supply, storage device, control device and access ports. The transmitter and power supply will be sufficient to transmit a viable signal into the immediate area.

In the case that two or more transmitter apparatuses are in close proximity, each will be configured in such a way as to ensure that the signal from each is distinguishable, either by a physical directional cone, or by including a distinguishing code in the signal. The method of distinguishing the signals is not an essential aspect of the invention.

The transmitter will either continuously or upon receiving a signal from a portable device broadcast a signal to any portable device in the immediate area using established communication protocols. Upon receiving the signal, a portable device will present the information contained in the signal to the user of the device via textual display, audio or visual means, depending on the type of portable device.

The transmitter, receiver and storage device will be controlled by a control device. The control device could be either a microprocessor or some sort of programmable array.

The contents of the signal to be transmitted shall be stored in an electronic storage device sufficient for the immediate application. The contents of the signal to be transmitted may be modified either by physically changing the storage device, or changing the information in the storage device by electronic means such as a direct connection to an access port on the transmitter apparatus, or a wireless signal sent from a physically separate diagnostic and programming device.

The transmitter apparatus may receive a request for more information from the portable device. Depending on the information selected by the advertiser, the transmitter apparatus will, on receipt of such a request from a portable device, transmit another signal which will present new alternatives to the user of the portable device. Such interactions will be recorded and temporarily stored in the storage device and will enable the user to access the information that is desired.

In addition to transmitting the informational message, the transmitter apparatus will also be capable of sending messages regarding its state for maintenance purposes either on its own or in response to a query from a diagnostic device that is received by the receiver.

In a further embodiment of the present invention, the transmitter apparatus will also be capable of accessing and updating accounts in a remote database. Suitably-equipped (able to transmit and receive signals by an established communication protocol which will be understood by the transmitter apparatus) portable devices may signal the transmitter apparatus associated with the advertisement. The portable device will have a unique identifier and furthermore the user of that device will have established an account in the remote database which will uniquely identify the user. The unique identifier for the device is necessary for updating an account in the remote database. Because there may be several users of any portable device, each user must be

distinguished. For protection, each user may choose a PIN (Personal Identification Number) which needs to be entered to activate that user's account. Upon receipt of a message from a portable device, the transmitter apparatus will signal the remote database where the interaction will be recorded. The value in points for each such interaction will be selected by the merchant and the points database maintainer, based on the type of interaction and other relevant factors. The method for signaling the remote database may be infrared, radio frequency or some other wireless technology. The communication is unidirectional, from the outdoor advertisement installation to the remote database. The user of the portable device may choose to query the remote database directly and can do so by a variety of means. The user's direct interactions with the database are not essential aspects of the invention.

CLAIMS:

We claim:

1. An apparatus for transmitting information from an outdoor advertisement to portable devices using established communication protocols comprised of:

- a transmitter;
- a receiver;
- a power supply;
- a control device; and
- an information storage device.

2. The apparatus of claim 1 wherein the transmitter transmits an infrared signal.

3. The apparatus of claim 1 wherein the transmitter transmits a radio frequency signal.

4. The apparatus of claim 1, 2 or 3 wherein the apparatus is further comprised of a plurality of access ports, said access ports being facilitating the exchange of data between the information storage device and a diagnostic and programming device.

5. A method for transmitting electronic information from a transmitter apparatus associated with an advertisement in a public place to portable devices, said transmitter apparatus including a transmitter, a receiver, a power supply and an information storage device, said method comprising:

- transmitting a signal to a portable device using an established communication protocol;
- obtaining feedback from said portable device receiving the signal;
- recording the feedback obtained from said portable device; and
- transmitting a subsequent signal according to the feedback obtained from said portable device.

6. The method of claim 5 wherein the signal is infrared.

7. The method of claim 5 wherein the signal is radio frequency.

8. The method of claim 5, 6 or 7 wherein the subsequent signal is sent to said portable device in the same manner as the original signal.

9. The method of claim 5, 6 or 7 wherein the feedback obtained from said portable device includes a unique identification code corresponding to an account in a remote database, and the subsequent signal is sent to said remote database where said account is updated based on the nature of the interaction between the transmitter apparatus and the portable device.